

Amendments to the Claims:

1. (Canceled)
2. (Currently Amended) A method of controlling flare, comprising:
moving a material through a roll-forming process; ~~and~~
measuring the material to obtain a flare characteristic associated with a zone
of the material; and
automatically varying a position of a roller to change ~~a~~the flare characteristic
associated with the zone of the material as the material moves through the roll-
forming process.
3. (Currently Amended) A method as defined in claim 2, wherein the material is
at least one of a formed component, a strip material, ~~and~~or a sheet material.
4. (Canceled)
5. (Canceled)

6. (Currently Amended) A method as ~~defined in claim 5~~, of controlling flare,
comprising:
- moving a material through a roll-forming process;
 - automatically varying a position of a roller to change a flare characteristic of
the material as the material moves through the roll-forming process;
 - obtaining a flare measurement value associated with the material and a flare
tolerance value;
 - comparing the flare measurement value to the flare tolerance value; and
 - determining a roller position value based on the comparison of the flare
measurement value and the flare tolerance value; and
 - storing the roller position value in a database, wherein the roller position value
may be retrieved from the database based on material identification information
associated with the material.
7. (Currently Amended) A method as defined in claim-4 2, wherein
automatically varying the position of the roller includes automatically varying the position of
the roller in response to the comparison of ~~the a~~ a flare measurement value and ~~the a~~ a flare
tolerance value.
8. (Currently Amended) A method as defined in claim-4 2, wherein the flare
measurement value is associated with at least one of a flare-in condition ~~and or~~ a flare-out
condition.
9. (Canceled)

10. (Currently Amended) A method ~~as defined in claim 9, wherein automatically varying the position of the roller includes automatically varying the position of the roller of~~ controlling flare, comprising:

moving a material through a roll-forming process;
determining a location of the material within the roll-forming process; and
automatically varying a position of a roller based on the location of the
material within the roll-forming process to change a flare characteristic of the
material as the material moves through the roll-forming process.

11. (Currently Amended) A method as defined in claim 2, wherein the material includes at least one of a C-shaped component ~~and~~ or a Z-shaped component.

12. (Currently Amended) A method ~~as defined in claim 2, wherein automatically varying the position of the roller includes automatically varying the position of the roller of~~ controlling flare, comprising:

moving a material through a roll-forming process; and
automatically varying a position of a roller in accordance with at least one of a
desired roller velocity, a desired roller ramp rate, ~~and~~ or a desired roller acceleration
to change a flare characteristic of the material as the material moves through the roll-
forming process.

13. (Previously Presented) A method as defined in claim 2, wherein automatically varying the position of the roller includes automatically varying an angle of the roller.

14. (Currently Amended) A method ~~as defined in claim 2, wherein automatically varying the position of the roller includes automatically varying the position of the roller of~~ controlling flare, comprising:

moving a material through a roll-forming process; and

automatically varying a position of a roller based on a material characteristic of the material to change a flare characteristic of the material as the material moves through the roll-forming process.

15. (Currently Amended) An apparatus for controlling flare, comprising:
a processor system including a memory; and
instructions stored in the memory that enable the processor system to:

detect a material moving through a roll-forming process; ~~and~~

measure the material to obtain a flare characteristic associated with a zone of the material; and

automatically vary a position of a roller to change ~~a~~ the flare characteristic associated with the zone of the material as the material moves through the roll-forming process.

16. (Currently Amended) An apparatus as defined in claim 15, wherein the material is at least one of a formed component, a strip material, ~~and or~~ a sheet material.

17. (Canceled)

18. (Canceled)

19. (Currently Amended) An apparatus ~~as defined in claim 18, wherein the~~
~~instructions stored in the memory enable the processor system to~~ for controlling flare,
comprising:

a processor system including a memory; and
instructions stored in the memory that enable the processor system to:
obtain a flare measurement value associated with the material and a
flare tolerance value;
compare the flare measurement value to the flare tolerance value;
determine a roller position value based on the comparison of the flare
measurement value and the flare tolerance value;
store the roller position value in a database; and
retrieve the roller position value from the database based on material
identification information associated with the material.

20. (Currently Amended) An apparatus as defined in claim 16, wherein the
instructions stored in the memory enable the processor system to automatically vary the
position of the roller in response to the comparison of ~~the~~ a flare measurement value and ~~the~~
a flare tolerance value.

21. (Currently Amended) An apparatus as defined in claim 1720, wherein the flare measurement value is associated with at least one of a flare-in condition ~~and~~or a flare-out condition.

22. (Currently Amended) An apparatus as ~~defined in claim 15, wherein the instructions stored in the memory enable the processor system to~~ for controlling flare, comprising:

a processor system including a memory; and

instructions stored in the memory that enable the processor system to:

detect a material moving through a roll-forming process;

automatically vary a position of a roller to change a flare characteristic

of the material as the material moves through the roll-forming process; and

determine a location of the material within the roll-forming process.

23. (Previously Presented) An apparatus as defined in claim 22, wherein the instructions stored in the memory enable the processor system to automatically vary the position of the roller based on the location of the material within the roll-forming process.

24. (Currently Amended) An apparatus as defined in claim 15, wherein the material includes at least one of a C-shaped component ~~and~~or a Z-shaped component.

25. (Currently Amended) An apparatus as ~~defined in claim 15, wherein the~~
~~instructions stored in the memory enable the processor system to automatically vary the~~
~~position of the roller for controlling flare, comprising:~~
a processor system including a memory; and
instructions stored in the memory that enable the processor system to:
detect a material moving through a roll-forming process; and
automatically vary a position of a roller in accordance with at least one
of a desired roller velocity, a desired roller ramp rate, ~~and or~~ a desired roller
acceleration.
26. (Previously Presented) An apparatus as defined in claim 15, wherein the
instructions stored in the memory enable the processor system to automatically vary an angle
of the roller.
27. (Currently Amended) An apparatus as ~~defined in claim 15, wherein the~~
~~instructions stored in the memory enable the processor system to automatically vary the~~
~~position of the roller for controlling flare, comprising:~~
a processor system including a memory; and
instructions stored in the memory that enable the processor system to:
detect a material moving through a roll-forming process;
automatically vary a position of a roller based on a material
characteristic of the material to change a flare characteristic of the material as
the material moves through the roll-forming process.

28. (Currently Amended) A machine accessible medium having instructions stored thereon that, when executed, cause a machine to:

detect a material moving through a roll-forming process; ~~and~~

measure the material to obtain a flare characteristic associated with a zone of the material; and

automatically vary a position of a roller to change ~~a~~the flare characteristic associated with the zone of the material as the material moves through the roll-forming process.

29. (Currently Amended) A machine accessible medium as defined in claim 28, wherein the material is at least one of a formed component, a strip material, ~~and~~or a sheet material.

30. (Previously Presented) A machine accessible medium as defined in claim 28 having instructions stored thereon that, when executed, cause the machine to:

obtain a flare measurement value associated with the material and a flare tolerance value;

compare the flare measurement value to the flare tolerance value; and

determine a roller position value based on the comparison of the flare measurement value and the flare tolerance value.

31. (Previously Presented) A machine accessible medium as defined in claim 30 having instructions stored thereon that, when executed, cause the machine to store the roller position value in a database.

32. (Previously Presented) A machine accessible medium as defined in claim 31 having instructions stored thereon that, when executed, cause the machine to retrieve the roller position value from the database based on material identification information associated with the material.

33. (Previously Presented) A machine accessible medium as defined in claim 30 having instructions stored thereon that, when executed, cause the machine to automatically vary the position of the roller in response to the comparison of the flare measurement value and the flare tolerance value.

34. (Currently Amended) A machine accessible medium as defined in claim 30, wherein the flare measurement value is associated with at least one of a flare-in condition ~~and~~or a flare-out condition.

35. (Previously Presented) A machine accessible medium as defined in claim 28 having instructions stored thereon that, when executed, cause the machine to determine a location of the material within the roll-forming process.

36. (Previously Presented) A machine accessible medium as defined in claim 35 having instructions stored thereon that, when executed, cause the machine to automatically vary the position of the roller based on the location of the material within the roll-forming process.

37. (Currently Amended) A machine accessible medium as defined in claim 28, wherein the material includes at least one of a C-shaped component ~~and~~or a Z-shaped component.

38. (Currently Amended) A machine accessible medium as defined in claim 28 having instructions stored thereon that, when executed, cause the machine to automatically vary the position of the roller in accordance with at least one of a desired roller velocity, a desired roller ramp rate, ~~and~~or a desired roller acceleration.

39. (Previously Presented) A machine accessible medium as defined in claim 28 having instructions stored thereon that, when executed, cause the machine to automatically vary an angle of the roller.

40. (Previously Presented) A machine accessible medium as defined in claim 28 having instructions stored thereon that, when executed, cause the machine to automatically vary the position of the roller based on a material characteristic of the material.

41. (Currently Amended) A system for controlling flare, comprising:
a roller configured to vary a flare characteristic of a material; ~~and~~
a first sensor configured to detect the flare characteristic associated with a zone of the material; and
a position adjustment system ~~operatively coupled to the roller and the first sensor~~ and configured to automatically adjust the roller to condition the flare characteristic associated with the zone of the material based on a measurement value obtained from the first sensor.
42. (Currently Amended) A system as defined in claim 41, wherein the material is at least one of a formed component, a strip material, ~~and~~ or a sheet material.
43. (Currently Amended) A system ~~as defined in claim 41, wherein the position adjustment system is configured to automatically adjust the roller for controlling flare,~~
comprising:
a roller configured to vary a flare characteristic of a material; and
a position adjustment system coupled to the roller and configured to automatically adjust the roller based on a location of the material to condition the flare characteristic of the material.
44. (Previously Presented) A system as defined in claim 41, further comprising a processor system communicatively coupled to the position adjustment system and configured to cause the position adjustment system to adjust the roller.

45. (Currently Amended) A system as ~~defined in claim 44, further comprising for~~
controlling flare, comprising:

a roller configured to vary a flare characteristic of a material;

a position adjustment system coupled to the roller and configured to
automatically adjust the roller to condition the flare characteristic of the material;

a processor system communicatively coupled to the position adjustment
system and configured to cause the position adjustment system to adjust the roller;
and

a sensor communicatively coupled to the processor system, ~~wherein the sensor~~
~~is~~ and configured to generate location information associated with the location of the
material and convey the location information to the processor system.

46. (Canceled)

47. (Currently Amended) A system as defined in claim-46 41, wherein the first
sensor includes at least one of a linear voltage displacement transducer, an optical sensor, a
laser sensor, a proximity sensor, ~~and or~~ an ultrasonic sensor.

48. (Currently Amended) A system as defined in claim-46 41, ~~wherein the sensor~~
~~is~~ further comprising a feedback sensor configured to generate ~~the flare another~~
value after the flare characteristic of the material is varied by the roller.

49. (Currently Amended) A system as defined in claim ~~46~~ 48, wherein the position adjustment system is configured to automatically adjust the roller based on the ~~flare~~ other measurement value.

50. (Currently Amended) A system as defined in claim 41, wherein the position adjustment system includes at least one of a servo motor, a stepper motor, a hydraulic motor, a pneumatic piston, ~~and or~~ a threaded rod.

51. (Previously Presented) A system as defined in claim 41, further comprising a linear encoder operatively coupled to the position adjustment system and configured to generate a measurement value associated with a position of the roller.

52. (Currently Amended) A system for controlling flare in a roll-forming process, comprising:

a storage interface configured to retrieve a roller position value from a memory; ~~and~~

a component position detector configured to detect a component; and

a flange roller adjuster communicatively coupled to the storage interface and the component position detector and configured to obtain the roller position value from the storage interface and change a position of a roller based on the roller position value in response to the component position detector detecting the component.

53. (Previously Presented) A system as defined in claim 52, further comprising:

a comparator communicatively coupled to the storage interface and configured to obtain a flare tolerance value from the storage interface; and

a sensor interface communicatively coupled to the comparator and configured to communicate a flare measurement value to the comparator, wherein the comparator is configured to compare the flare tolerance value to the flare measurement value, and wherein the roller position value is determined based on the comparison of the flare tolerance value and the flare measurement value.

54. (Currently Amended) A system as defined in claim 53, wherein the sensor interface is configured to be communicatively coupled to at least one of a linear voltage displacement transducer, an optical sensor, a laser sensor, a proximity sensor, ~~and~~or an ultrasonic sensor.

55. (Previously Presented) A system as defined in claim 52, wherein the flange roller adjuster is configured to be communicatively coupled to a position adjustment system and a linear encoder.

56. (Canceled)

57. (Canceled)

58. (New) A method as defined in claim 2, wherein automatically varying the position of the roller to change the flare characteristic associated with the zone of the material as the material moves through the roll-forming process comprises automatically varying the position of the roller to a first position as the zone of the material engages the roller and automatically varying the position of the roller to a second position as another zone of the material engages the roller.

59. (New) A method as defined in claim 2, further comprising detecting a leading edge of the material and automatically varying the position of the roller in response to detecting the leading edge of the material.

60. (New) A method as defined in claim 2, wherein automatically varying the position of the roller to change the flare characteristic associated with a zone of the material as the material moves through the roll-forming process comprises varying a position of the roller from a home position to a second position and returning the roller to the home position as the material exits the roll-forming process.

61. (New) A method as defined in claim 60, further comprising determining a roller position value associated with varying the position of the roller to the second position based on a measured value of the flare characteristic.

62. (New) An apparatus as defined in claim 15, wherein the instructions stored in the memory enable the processor system to automatically vary the position of the roller to a first position as the zone of the material engages the roller and automatically vary the position of the roller to a second position as another zone of the material engages the roller.

63. (New) An apparatus as defined in claim 15, wherein the instructions stored in the memory enable the processor system to detect a leading edge of the material and automatically vary the position of the roller in response to detecting the leading edge of the material.

64. (New) An apparatus as defined in claim 15, wherein the instructions stored in the memory enable the processor system to automatically vary the position of the roller to change the flare characteristic associated with the zone of the material as the material moves through the roll-forming process by varying a position of the roller from the a home position to a second position and returning the roller to the home position as the material exits the roll-forming process.

65. (New) An apparatus as defined in claim 64, wherein the instructions stored in the memory enable the processor system to determine a roller position value associated with varying the position of the roller to the second position based on a measured value of the flare characteristic.